

AMENDMENT

WHAT IS CLAIMED IS:

1. (Currently Amended) ~~An engine valve actuation~~ A system for actuating two engine valves each having an axial center spaced a first distance from each other, said system comprising:

a housing having a first slave piston bore, a second slave piston bore, and a passage adapted to provide hydraulic fluid to the first and second slave piston bores;

a first slave piston slidably disposed in the first slave piston bore and a second slave piston slidably disposed in the second slave piston bore, said first and second slave pistons each having an axial center spaced a second distance from each other;

a master piston operatively connected to the housing passage; ~~and~~

a hydraulic fluid control valve operatively connected to the housing passage; and

a valve bridge disposed between (i) the first and second slave pistons and (ii) the two engine valves,

wherein the first distance is different than the second distance.

2. (Cancelled).

3. The system of Claim 1, further comprising a valve seating device disposed in the housing passage.

4. The system of Claim 3 wherein the valve seating device comprises:

a hydraulic fluid opening adapted to provide hydraulic communication between (i) the housing passage and (ii) the first and second slave piston bores; and means for selectively occluding the hydraulic fluid opening.

5. The system of Claim 3 wherein the valve seating device is disposed substantially directly above the first slave piston.

6. The system of Claim 5 wherein the second slave piston has a greater mass than the first slave piston.

7. The system of Claim 3 wherein at least one slave piston is solid throughout.

8. (Cancelled).

9. (Withdrawn).

10. (Withdrawn).

11. (Withdrawn).

12. (Withdrawn).

13. (Withdrawn).

14. (Withdrawn).

15. (Withdrawn).

16. (Withdrawn).

17. (Withdrawn).

18. (Withdrawn).

19. (Cancelled).

20. (Currently Amended) The system of Claim 1 2 wherein the first and second slave pistons are disposed above the valve bridge at central locations relative to the locations at which the valve bridge contacts the first and second engine valves.

21. The system of Claim 1 wherein the valve actuation system is a variable valve actuation system.

22. The system of Claim 1 wherein the valve actuation system is a fixed timing valve actuation system.

23. (Currently Amended) A method of actuating two or more engine valves in an internal combustion engine using a system having a master piston hydraulically linked to two or more slave pistons, comprising the steps of:

imparting a linear motion to the master piston;

imparting a linear motion to the two or more slave pistons responsive to the master piston motion;

actuating the two or more engine valves responsive to the motion of the two or more slave pistons; and

seating the two or more engine valves by throttling hydraulic fluid flow past a single point located between the two or more slave pistons and the master piston thereby hydraulically opposing the linear motion of the two or more slave pistons as the engine valves approach valve seats.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. The system of Claim 3 wherein the valve seating device is integrated into the first slave piston.

29. (New) The system of Claim 1 wherein the first distance is greater than the second distance.

30. (New) The system of Claim 1 wherein the master piston is oriented substantially perpendicular to the first and second slave pistons.

31. (New) An engine valve actuation system comprising:

a housing having a first slave piston bore, a second slave piston bore, and a passage adapted to provide hydraulic fluid to the first and second slave piston bores;

a first slave piston slidably disposed in the first slave piston bore and a second slave piston slidably disposed in the second slave piston bore;

a master piston operatively connected to the housing passage;

a hydraulic fluid control valve operatively connected to the housing passage; and

a valve bridge disposed between (i) the first and second slave pistons and (ii) the two engine valves.

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